

BARBARA KELLERMAN SMITH

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EDUCATION

Doctor of Philosophy in Rehabilitation Science August 2010
University of Florida, Gainesville, Florida
Dissertation: Inspiratory Muscle Strength Training and Diaphragm Remodeling
Mentor: A. Daniel Martin, PT, PhD

Master of Health Science August 1998
University of Florida, Gainesville, Florida

Master of Physical Therapy May 1994
University of Pittsburgh, Pittsburgh, Pennsylvania

Bachelor of Science in Molecular Biology May 1992
Grove City College, Grove City, Pennsylvania

LICENSURE INFORMATION

1996 to present	Physical Therapist, Florida	PT-0014325
2000 to 2006	Physical Therapist, Oklahoma	PT-2989
1999 to 2006	Physical Therapist, California	PT-24150
1996 to 2000	Physical Therapist, Texas	PT-1122653
1994-1996	Physical Therapist, Pennsylvania	PT-008458-L

WORK EXPERIENCE: ACADEMIC

Assistant Professor February 2019 – present
Department of Physical Therapy
University of Florida, Gainesville, FL

Research Assistant Professor January 2011 – February 2019
Department of Physical Therapy
University of Florida, Gainesville, FL

Research Assistant Professor May 2014 – present
Department of Pediatrics
University of Florida, Gainesville, FL

Post-doctoral Associate August 2010 – December 2010
Department of Physiological Sciences
University of Florida, Gainesville, FL

Graduate Research Assistant January 2007 – September 2007

Department of Physical Therapy
University of Florida, Gainesville, FL

Adjunct Instructor

Physical Therapy Assistant Program
Pensacola Junior College, Pensacola, FL

June 2006 – November 2006

EMPLOYMENT AND POSITIONS HELD: CLINICAL

On-call Physical Therapist

UF Health Shands Medical Center, Gainesville, FL

December 2006 – February 2015

Senior Therapist and Clinical Coordinator of Clinical Education

Sacred Heart Hospital, Pensacola, FL

May 2003 – December 2006

Physical Therapy Team Leader

Integrated Specialty Hospital, Edmond, OK

March 2001 – May 2003

Physical Therapist

HealthSouth Rehabilitation Hospital, Oklahoma City, OK

April 2000 – March 2001

Physical Therapist

F.I.R.M. Associates, Inc., Fresno, CA

March 1999 – April 2000

Physical Therapist

NovaCare Rehabilitation, Inc., Corpus Christi, TX

August 1998 – February 1999

On-call Physical Therapist

Shands Medical Center, Gainesville, FL

September 1996 – July 1998

Physical Therapist

University of Pittsburgh Medical Center, Pittsburgh, PA

May 1994 – August 1996

RESEARCH SUPPORT

Ongoing Research Support

Title: Magnetic Resonance Imaging and Biomarkers for Muscular Dystrophy

Participation: Co-Investigator

Agency: National Institute of Arthritis and Musculoskeletal and Skin Diseases

Funding Period: September 2020 – August 2025

Title: Augmenting a Stroke Wellness Program with Respiratory Muscle Training: A Randomized Controlled Trial

Participation: Co-Investigator

Agency: Florida Department of Health

Funding Period: June 2020 – May 2024

Title: Effect of Intermittent Hemidiaphragm Stimulation during Surgery on Mitochondrial Function, Single Fiber Contractile Force and Catabolic Pathways in Humans (R01 AR072328)
Participation: Co-Investigator (2017-9); Co-Principal Investigator (2019-)
Agency: National Institute of Arthritis and Musculoskeletal and Skin Diseases
Funding Period: June 2017 – May 2021

Title: Acute Intermittent Hypoxia and Breathing in Amyotrophic Lateral Sclerosis
Participation: Principal Investigator
Agency: University of Florida Moonshot Initiative
Funding Period: January 2019 – December 2020

Title: Phase II Study of AAV9-GAA Gene Transfer in Pompe Disease (U01HL121842)
Participation: Co-Investigator (*B. Byrne, Principal Investigator.*)
Agency: National Heart, Lung, and Blood Institute (NHLBI)
Funding Period: September 2015 – September 2020

Completed Research Support

Title: A Clinical Assessment Study in X-Linked Myotubular Myopathy Subjects (INCEPTUS)
Participation: Principal Investigator
Agency: Audentes Therapeutics
Funding Period: May 2016 – November 2019

Title: Dynamic Respiratory Muscle Function in Late-Onset Pompe Disease (NCT02354664)
Participation: Principal Investigator
Agency: BioMarin Pharmaceutical Foundation
Funding Period: November 2015 – July 2019

Title: Diaphragm Pacing and Rehabilitation in Pompe Disease (R21HD090752)
Participation: Principal Investigator
Agency: National Institute of Child Health and Human Development (NICHD)
Funding Period: September 2016 – January 2019

Title: Respiratory Muscle Function in Untreated X-linked Myotubular Myopathy (00098427)
Participation: Principal Investigator
Agency: Audentes Therapeutics, Inc.
Funding Period: July 2015 – June 2018

Title: A Study of Respiratory Muscle Strength, including Effort-Independent Measures, in Subjects with Late-Onset Pompe Disease (00096262)
Participation: Principal Investigator
Agency: BioMarin Inc.
Funding Period: April 2015 – April 2018

Title: Diaphragm Pacing and Quality of Life in Patients with Pompe Disease
Participation: Principal Investigator

Agency: Acid Maltase Deficiency Association
Funding Period: March 2014- February 2017

Title: Clinical Trial Readiness in Duchenne Muscular Dystrophy.
Participation: Co-Investigator (*B. Byrne, Principal Investigator.*)
Agency: Solid GT, LLC
Funding Period: April 2015 - December 2016.

Title: Measures of Electrophysiological and Functional Recovery After Diaphragm Pacing in Pompe Disease (00090529)
Participation: Principal Investigator
Agency: University of California San Diego
Funding Period: June 2014 – May 2015

Title: Intrapleural Microdystrophin Gene Therapy for Clinical Translation.
Participation: Co-Investigator (*B. Byrne, Principal Investigator.*)
Agency: Department of Defense (11265471)
Funding Period: August 2013 - July 2016.

Title: Clinical and Electrophysiological Assessment of Respiratory Function in Pompe Disease (00084590)
Participation: Principal Investigator
Agency: Acid Maltase Deficiency Association
Funding Period: April 2012 – September 2013

Title: Rehabilitation Research Career Development Program (K12 HD055929).
Participation: Scholar (75% effort). (*K. Ottenbacher, Principal Investigator.*)
Agency: National Institutes of Health (NICHD).
Funding Period: January 2011 – December 2013

Title: Safety Study of Recombinant Adeno-Associated Virus Acid Alpha-Glucosidase to Treat Pompe Disease
Participation: Sub-Investigator (50% effort). (*B. Byrne, Principal Investigator.*)
Agency: National Institutes of Health (NHLBI-GTRP)
Funding Period: November 2010 – November 2015

Title: Interdisciplinary Pre-doctoral Training in Rehabilitation and Neuromuscular Plasticity. (T32 HD043730)
Participation: Predoctoral trainee (*K. Vandeborne, Principal Investigator.*)
Agency: National Institutes of Health (NICHD), 2003-2013
Funding Period: 2007-10

Consultant on Grants

Title: Inspiration Point: A Digital Pulmonary Rehabilitation Tool for Use with Self-Management Interventions. (R44 HL127502)
Participation: Scientific Consultant (*S. Flynn, Principal Investigator.*)
Agency: National Institutes of Health (NHLBI)

Funding Period: 2016-19

EDITOR OF SCHOLARLY JOURNALS, SERVICE ON EDITORIAL ADVISORY BOARDS, REVIEWER FOR SCHOLARLY JOURNALS

Editorial Positions

- 2016- Physical Therapy Journal Editorial Board Member

Ad Hoc Reviewer for Scholarly Journals

- 2009- Journal of Acute Care Physical Therapy (formerly Acute Care Perspectives)
- 2010- Physical Therapy Journal
- 2012- Respiratory Care Journal
- 2012- Archives of Physical Medicine and Rehabilitation
- 2014- Lung
- 2014- Critical Care
- 2016- Muscle & Nerve
- 2017- Physiological Reviews
- 2018- American Journal of Respiratory and Critical Care Medicine
- 2018- Nature Digital Medicine
- 2018- Cardiopulmonary Physical Therapy Journal
- 2019- PLoS One
- 2019- Pediatric Pulmonology
- 2020- Journal of Applied Physiology
- 2020- Journal of Physiology

CONSULTATIONS OUTSIDE THE UNIVERSITY

- Capricor Therapeutics, New York, NY 2017
Scientific advisor on respiratory muscle testing in non-ambulant Duchenne muscular dystrophy
- Audentes Therapeutics, Washington, DC 2016
Trained NIH respiratory therapists in standardized pediatric muscle testing
- Sanofi Corporation, Gainesville, FL 2015
Developed pulmonary function and exercise testing manuals in pediatric Niemann-Pick Disease
- Sanofi Corporation, Gainesville, FL 2013
Developed pulmonary function testing manuals for adult Pompe disease

MEMBERSHIPS IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

National

- American Physiological Society. Member since 2019.
- American Physical Therapy Association. Member since 1993.
 - *Section Member* – Cardiopulmonary (1995-1998, 2007-present), Acute Care (1995-present), Research (1996-8, 2007-present)
- Member- American Society for Gene and Cell Therapy, 2013-4

- Member- American Thoracic Society, 2008-13
- Member- American Congress of Rehabilitation Medicine, 2009-10
- Member- Arthritis Health Professionals of Western Pennsylvania, 1994 to 1996

Regional, State, or Local

- Florida Physical Therapy Association. Member since 2007.
 - Acute Care Special Interest Group: Program Director (2018-9); Chair (2019-present)
 - Poster Abstract Reviewer (2019-present)

CREATIVE WORKS OR ACTIVITIES

“Physiological Measurement of Transdiaphragmatic Pressure” 2015
Instructional Multimedia Presentation

“Twitch Diaphragmatic Pressure with Phrenic Magnetic Stimulation” 2015
Instructional Multimedia Presentation

TEACHING, ADVISING, AND INSTRUCTIONAL ACCOMPLISHMENTS

University of Florida, PhD Program in Rehabilitation Science

Course Instructor

- PhD Seminar- RSD 6930 (1 credit, Spring semester, 2015 and 2018)

Guest Lecturer

- Breathing and Airway Defense: Implications for Rehabilitation- RSD 6935C (Spring semester, 2016 and 2018)
- Translational Neuroscience- RSD 6930 (Spring semester, 2015)

University of Florida, Department of Physical Therapy

Course Instructor

- Principles of Disease- PHT 6302C (4 credits, Fall semester, 2013-present)
- Basic Clinical Skills 2- PHT 6207C (2 credits, Spring semester, 2011-2014)

Guest Lecturer

- Basic Clinical Skills 2 – PHT 6206C (Fall Semester, 2019-present)
- Exam and Evaluation – PHT 6189C (Spring Semester, 2017-9)
- Prosthetics & Orthotics- PHT 6702C (Summer semester, 2018)
- Cardiopulmonary Disorders in Physical Therapy- PHT 6381C, (Fall semester, 2007-8, 2012-present)
- Human Physiology- PHT 6935C, (Fall semester, 2011-2013, 2016-present)
- Professional Issues 1- PHT 6024, (Fall semester, 2015-present)
- Basic Clinical Skills 2- PHT 6207C (Spring semester, 2015-2017)
- Differential Diagnosis in Physical Therapy- PHT 6730, (Summer semester, 2008-2013, 2015)
- Pediatric Physical Therapy- PHT 6322, (Summer semester, 2012-2014)

Project Mentor

- Evidence-Based Practice III- PHT 6609 (Spring semester, 2010-present)

Group Leader

- Interdisciplinary Family Health- BMS 6829, (Fall and Spring semesters, 2011-2016)

Graduate Teaching Assistant

- Therapeutic Exercise and Neurologic Evaluation, Exercise Physiology, Modalities, Orthopedics, and Human Diseases Class (1996-1998)

Pensacola Junior College, Department of Dental and Emergency Services, Physical Therapist Assistant
Course Coordinator

- Therapeutic Techniques and Disabilities II PHT 2162/2162-L, (4 credits, 2006)

STUDENT MENTORING

Graduate Committee Activities

Candidate's Role	Student	Major	Complete Date
Member Ph.D.	FNU Shakeel Ahmed	Rehabilitation Science	August 2018
Member Ph.D.	Alison Barnard	Rehabilitation Science	December 2018
Co-Mentor Ph.D.	Ela Sajjidi	Rehabilitation Science	ongoing
Mentor Ph.D.	Jessica Cornman	Rehabilitation Science	ongoing

Undergraduate Student Advisement

Lara Diaz, 2020-1	College of Public Health and Health Professions Senior Honors Thesis
Patrick Dickinson, 2019-20	College of Public Health and Health Professions Senior Honors Thesis
Jennifer Barquin, 2017-8	College of Public Health and Health Professions Senior Honors Thesis; 2017-8 Dean's Scholar Awardee
Shannon Allen, 2016-7	College of Public Health and Health Professions Senior Honors Thesis; University Scholars Program Awardee
Cassie Paulus, 2016-7	College of Public Health and Health Professions Senior Honors Thesis
Melissa Smith, 2016-7	College of Public Health and Health Professions Senior Honors Thesis
Jordan Marcus, 2015-16	College of Public Health and Health Professions Senior Honors Thesis; University Scholars Program Awardee
Stephanie Salabarría, 2014-15	College of Public Health and Health Professions Senior Honors Thesis
Valerie Vernot, 2012-15	College of Liberal Arts and Sciences, Psychology Major
Rachel Ehrlich, 2012-13	College of Public Health and Health Professions Senior Honors Thesis

Cameron Martin, 2011-13	College of Liberal Arts and Sciences, Biology Major Recipient, 2013 NCAA Byers Postgraduate Scholarship
Lauren Donnangelo, 2010-12	College of Liberal Arts and Sciences, Biology Major 2012 University of Florida-Howard Hughes Medical Institute Science for Life Scholar; University Scholars Program Awardee
Brittany Darragh, 2008-11	College of Liberal Arts and Sciences, Honors Thesis in Biology University of Florida-Howard Hughes Medical Institute Mentee
Sara Attia, 2008-9	University of Florida-Howard Hughes Medical Institute Mentee Finalist: Research Poster Award, Southeastern American College of Sports Medicine Conference, February 12-14, 2009
Christine Ancheta, 2007-8	College of Public Health and Health Professions Senior Honors Thesis
Lisa Carter, 2007-8	College of Public Health and Health Professions Senior Honors Thesis
Samantha Justice, 2007-8	College of Public Health and Health Professions Senior Honors Thesis Awardee: Outstanding Poster Presentation, College of Public Health and Health Professions Research Day, April 16, 2008

PROFESSIONAL SERVICE

National

- American Physical Therapy Association.
 - *Acute Care Section Research Committee: Member-* 2011, *Committee Chair-* 2011- present
 - *Acute Care Section Nominating Committee: Member-* 2008-11, *Committee Chair-* 2010-11
 - *Volunteer Mentor-* Members Mentoring Members, 2006-2010
 - *Volunteer Contributor-* Hooked on Evidence, 2008-2012
 - *AdHoc Reviewer-* PTNow, 2015-8
- *Expert Clinician, Respiratory Care*, Friedreich's Ataxia Consensus Clinical Management Guidelines, Friedreich's Ataxia Research Alliance, 2020
- *Member*, Data Safety and Monitoring Board. "Behavioral Activation-Rehabilitation to Improve Depressive Symptoms & Physical Function After Acute Respiratory Failure." K23HL138206, PI: Ann Parker, MD, 2016-present.
- *Member*, Duchenne Pulmonary Outcomes Work Group, Parent Project Muscular Dystrophy, 2016.
- *Member*, Regenerative Rehabilitation Work Group, APTA's Frontiers in Rehabilitation Science and Technology (FiRST) Initiative, 2013-present.
- *Member Ad-Hoc Respiratory Committee*, SCI NeuroRecovery Network, Christopher and Dana Reeve Foundation, 2011-2013.

State

- *Acute Care Special Interest Group:* Florida Physical Therapy Association, Program Chair: 2018-9, Chair: 2019-present.
- *Family Volunteer*, Camp Boggy Creek, Eustis, FL, 2013-2016.

Local

- *Chairperson*- Gainesville sub-district of Northern Florida Physical Therapy Association, 1996-1997
- *Continuing Education Committee Member*- Southwestern Pennsylvania Physical Therapy Association, 1993 to 1996

UNIVERSITY GOVERNANCE AND SERVICE

University

- 2017- Faculty Mentor, University Multicultural Mentorship Program
- 2017-20 Member, Committee on Committees (Chair 2019-20)
- 2014- Advisory Board Member, University of Florida Center for Respiratory Research and Rehabilitation
- 2012-3 Member, Parking and Transportation Committee

College

- 2019- Faculty Council, College of Public Health and Health Professions
- 2019- PPHP Research Day Poster Reviewer
- 2016-8 Neuromuscular Plasticity Symposium Poster Reviewer
- 2011-12 PPHP Research Day Abstract Reviewer

Department/Center

- 2016- DPT Equal Access Clinic
- 2012- Professionalism Development Committee (Committee Chair, 2014-9)
- 2018-9 McKnight Brain Institute Seed Grant Reviewer
- 2016-8 Admissions Committee Member
- 2014-6 Scholarship Committee Member
- 2015-6 Curriculum Review Task Force Member
- 2012-4 DPT Transition Task Force Member
- 2012 Internship Length Task Force Member
- 2013 Research Space Utilization Task Force Member

HONORS AND AWARDS

National

- Outstanding Research Publication, Journal of Acute Care Physical Therapy, 2018
- Margaret L. Moore Award for Outstanding New Faculty Member, American Physical Therapy Association, 2016
- New Investigator of the Month, American Society of Gene & Cell Therapy, September 2013
- Excellence in Research Award, American Society of Gene & Cell Therapy, 2013
- Cardiovascular and Pulmonary Section Research Platform Award, Combined Sections Meeting APTA, 2013
- Travel Award, UC Davis 10th Annual Gene Therapy Symposium, 2011
- Featured Researcher, Foundation for Physical Therapy, April 2011
- Cardiovascular and Pulmonary Section Research Poster Award, Combined Sections Meeting APTA, 2010
- Promotion of Doctoral Studies II Scholarship. Foundation for Physical Therapy. Endowed by the Cardiovascular and Pulmonary Section APTA, in honor of Scot C. Irwin, PT, DPT, CCS, 2009-10

- Promotion of Doctoral Studies I Scholarship. Foundation for Physical Therapy. Endowed by the Cardiovascular and Pulmonary Section APTA, in honor of Scot C. Irwin, PT, DPT, CCS, 2008-9
- American Physical Therapy Association, Mary McMillan Post-Professional Scholarship, 1998
- University of Pittsburgh Medical Center Tuition Remission Scholarship, 1994
- Omicron Delta Kappa Leadership Honor Society, Inducted 1991

Local

- Outstanding Young Alumnus Award, University of Florida Department of Physical Therapy, 2015-6
- Graduate Research Grant, College of PPHP Research Day, University of Florida, 2009
- Group Assisted Training of Research Mentorship Award, University of Florida and Howard Hughes Medical Institute, 2008-9
- Outstanding Poster Presentation, College of PPHP Research Day, University of Florida, 2007
- University of Florida College of Health Professions, Charlotte Liberty Scholarship, 1997

PUBLICATIONS

Refereed Publications

1. **Smith, BK.** Ultrafast ultrasound responses to twitch stimulation: bridging the gap between non-volitional and non-invasive tests of diaphragm contractility. *Journal of Physiology*. 2020; doi: 10.1113/JP280863. PMID: 33124690.
2. Salabarria S, Nair J, Clement N, **Smith BK**, Raben N, Fuller D, Byrne BJ, Corti M. Advancements in AAV-mediated Gene Therapy for Pompe Disease. *Journal of Neuromuscular Diseases*. 2020; 7(1): 15-31. PMID: 31796685. PMCID: PMC7029369.
3. O'Halloran KD, **Smith, BK.** Diaphragm remodeling following cervical spinal cord injury: can intrinsic neural plasticity be harnessed to improve respiratory motor function? *Journal of Physiology*. 2020; 598(11): 2049-50. PMID: 32266973.
4. **Smith BK**, Allen S, Martin AD, Byrne BJ. Dynamic respiratory muscle function in late-onset Pompe disease. *Scientific Reports*. 2019; 9:1:19006. PMID: 31831753; PMCID: PMC6908708.
5. Barnard AM, Lott DJ, Batra A, Triplett WT, Forbes SC, Riehl SL, Willcocks RJ, **Smith BK**, Vandenborne K, Walter GA. Imaging respiratory muscle quality and function in Duchenne muscular dystrophy. *Journal of Neurology*. 2019; 266: 2752-63. PMID: 31350642. PMCID: PMC6810837
6. Byrne BJ, Fuller DD, **Smith BK**, Clement N, Coleman K, Cleaver B, Vaught L, Falk DJ, McCall A, Corti M. Pompe disease gene therapy: neural manifestations require consideration of CNS directed therapy. *Annals of Translational Medicine*. 2019; 7(13): 290. PMID: 31392202. PMCID: PMD6642929.
7. Pitts TE, Bordelon R, Huff A, Byrne BJ, **Smith BK.** Cough effectiveness and pulmonary hygiene practices in patients with Pompe disease. *Lung*. 2019; 197(1): 1-8. PMID: 30361764. PMCID: PMC6366453.

8. Ahmed S, Martin AD, **Smith BK**. Inspiratory Muscle Training in Patients with Prolonged Mechanical Ventilation: Narrative Review. *Cardiopulmonary Physical Therapy Journal*. 2019; 30(1): 44-50. PMID: 31105474. PMCID: PMC6521954.
9. Senesac CD, Lott DJ, Willcocks RJ, Duong T, **Smith BK**. Lower Extremity Functional Outcome Measures in Duchenne Muscular Dystrophy- A Delphi Survey. *Journal Neuromuscular Disease*. 2019; 6(1): 75-83. PMID: 30562905. PMCID: PMC6309302.
10. Huff A, Reed MD, **Smith BK**, Brown EH, Ovechkin AV, Pitts T. Strategies for the integration of cough and swallow to maintain airway protection in humans. *Lung*. 2018; 196: 601-8. PMID: 29926179. doi: 10.1007/s00408-018-0133-7.
11. **Smith BK**, Carter N, Arteaga A, Dinh AC, Martin AD. Acute and six-month outcomes in recipients of lung transplant following lower extremity strength training. *Journal of Acute Care Physical Therapy*. 2018; 9: 145-54. doi: 10.1097/JAT.0000000000000081
12. **Smith BK** and Falk DJ. Mechanical Ventilation for Duchenne Muscular Dystrophy: Sinner or Saint? *Muscle & Nerve*. 2018; 57(3): 353-5. PMID: 29023941.
13. Corti M, Liberati C, **Smith BK**, Lawson LA, Tuna IS, Conlon TJ, Coleman KE, Islam S, Herzog RW, Fuller DD, Collins SW, Byrne BJ. Safety of Intradiaphragmatic Delivery of Adeno-Associated Virus-Mediated Alpha-Glucosidase (rAAV1-CMG-hGAA) Gene Therapy in Children Affected by Pompe Disease. *Human Gene Therapy Clinical Development*. 2017; 298(2): 216-24. PMID: 29160099. PMCID: PMC5733674.
14. Huff A, Brown A, **Smith BK**, Pitts T. Mechanisms for successful rehabilitation of cough in Parkinson's disease using Expiratory Muscle Strength Training. *Perspectives of the ASHA Special Interest Groups*. 2017; 13(2): 93-102.
15. Mack DL, Poulard K, Goddard MA, Latournerie V, Snyder JM, Grange RW, Elverman MR, Denard J, Veron P, Buscara L, Le Bec C, Hogrel JY, Brezovec AG, Meng H, Yang L, Liu F, O'Callaghan M, Gopal N, Kelley VE, **Smith BK**, Strande JL, Mavilio F, Beggs AH, Mingozzi F, Lawlor MW, Buj-Bello A, Childers MK. Systemic AAV8-mediated gene therapy drives whole body correction of myotubular myopathy in dogs. *Molecular Therapy*. 2017; 25(4): 839-54. PMID: 28237839. PMCID: PMC5383631.
16. Mankowski RT, Ahmed S, Beaver T, Marvin D, Chul H, Hess P, Martin T, **Smith BK**, Someya S, Leeuwenburgh A, Martin AD. Intraoperative hemidiaphragm electrical stimulation reduces oxidative stress and upregulates autophagy in surgery patients undergoing mechanical ventilation- exploratory study. *Journal of Translational Medicine*. 2016; 14(1): 305. PMID: 27784315. PMCID: 5080720.
17. **Smith BK**, Martin AD, Lawson LA, Vernot V, Marcus J, Islam S, Shafi N, Corti M, Collins SW, Byrne BJ. Inspiratory muscle conditioning exercise and diaphragm gene therapy in Pompe disease: clinical evidence of respiratory plasticity. *Experimental Neurology*. 2017; 287 (Pt 2): 216-24. PMID: 27453480. PMCID: 5178134.

18. **Smith BK**, Fuller DD, Martin AD, Lottenberg L, Islam S, Lawson LA, Onders RP, Byrne BJ. Diaphragm pacing in ventilator dependent Pompe disease. *Physical Therapy*. 2016; 96(5): 696-703. PMID: 26893511. PMCID: PMC4858660.
19. **Smith BK**, Corti M, Martin AD, Fuller DD, Byrne BJ. Altered activation of the diaphragm in late-onset Pompe disease. *Respiratory Physiology & Neurobiology*. 2016; 222:11-5. PMID: 26612101. PMCID: PMC4869700.
20. **Smith BK**, Renno M, Green MM, Sexton T, Martin D, Corti M, Byrne BJ. Respiratory motor function in individuals with centronuclear myopathy and ventilatory insufficiency. *Muscle and Nerve*. 2016; 52(2): 214-21. PMID: 26351754. PMCID: PMC4718843.
21. Goddard MA, Mack DL, Hogrel JY, Czerniecki SM, Kelly VE, Snyder JM, Grange RW, Lawlor MW, **Smith BK**, Beggs AH, Childers MK. Muscle pathology, limb strength, walking gait, respiratory function and neurological impairment establish disease progression in the p.N155K canine model of X-linked myotubular myopathy. *Annals of Translational Medicine*. 2015; 3(18): 262. doi: 10.3978/j.issn.2305-5839.2015.10.31 PMID: 26605308. PMCID: PMC4630545.
22. Corti M, **Smith BK**, Falk D, Fuller DD, Subramony SH, Byrne BJ, Christou EA. Altered activation of the tibialis anterior in individuals with Pompe disease: implications for motor unit dysfunction. *Muscle and Nerve*. 2015; 51(6): 877-83. PMID: 25186912. PMCID: PMC4348349.
23. Corti M, Elder M, Falk D, Lawson LA, **Smith BK**, Nayak B, Conlon T, Clement N, Erger K, Lavassani E, Green M, Doerfler P, Herzog R, Byrne BJ. B-cell depletion is protective against anti-AAV capsid immune response: a human subject case study. *Molecular Therapy Methods: Clinical Development*. 2014; 1: pii: 14033. PMID: 25541616. PMCID: PMC4275004.
24. Byrne BJ, Collins S, Mah C, **Smith B**, Conlon T, Martin AD, Corti M, Cleaver B, Islam S, Lawson LA. Phase I/II trial of diaphragm delivery of recombinant adeno-associated virus acid alpha-glucosidase (rAAV1-CMV-GAA) gene vector in patients with Pompe disease. *Human Gene Therapy: Clinical Development*. 2014; 25(3): 143-63. PMID: 25238277.
25. **Smith BK**, Mathur S, Ye F, Martin AD, Truelson S, Vandenborne K, Davenport PW. Intrinsic Transient Tracheal Occlusion Training Facilitates Myogenic Remodeling in Rodent Parasternal Intercostal Fibers. *Journal of Rehabilitation Research and Development*. 2014; 51(5): 841-54. PMID: 25509059. PMCID: PMC4269303.
26. Ahn B, Beaver T, Martin T, Hess P, Brumback BA, Ahmed S, **Smith BK**, Leeuwenburgh C, Martin AD, Ferreira LF. Phrenic nerve stimulation increases human diaphragm fiber force after cardiothoracic surgery. *American Journal of Respiratory and Critical Care Medicine*. 2014; 190(7): 837-9. PMID: 25271750. PMCID: PMC4299610.
27. Ye F, McCoy SC, Ross HH, Bernardo JA, Beharry AW, Senf SA, Judge AR, Beck DT, Conover CF, Cannady DF, **Smith BK**, Yarrow JF, Borst SE. Transcriptional regulation of myotrophic actions by testosterone and trenbolone on androgen-responsive muscle. *Steroids*. 2014; 87: 59-66. PMID: 24928725.

28. **Smith BK**, Goddard M, Childers MK. Respiratory assessment in centronuclear myopathies. *Muscle and Nerve*. 2014; 50 (3): 315-26. PMID: 24668768. PMCID: PMC4140950.
29. Martin AD, Joseph AM, Beaver TM, **Smith BK**, Martin TD, Berg K, Hess PK, Deoghare HV, Leeuwenburgh, C. Effect of intermittent phrenic nerve stimulation during cardiothoracic surgery on mitochondrial respiration in the human diaphragm. *Critical Care*. 2014; 42(2): e152-6. PMID: 24126442. PMCID: PMC3947040.
30. **Smith BK**, Gabrielli A, Davenport PW, Martin AD. Effect of Training on Inspiratory Load Compensation in Weaned and Unweaned Mechanically Ventilated ICU Patients. *Respiratory Care*. 2014; 59(1): 22-31. PMID: 23764858. PMCID: PMC4157996.
31. Mah CS, Soustek MS, Todd AG, McCall A, **Smith BK**, Corti M, Falk DJ, Byrne BJ. Adeno-Associated Virus-Mediated Gene Therapy for Metabolic Myopathy. *Human Gene Therapy*. 2013; 24(11): 928-36. PMID: 24164240. PMCID: PMC3814817.
32. Fuller DD, Elmallah M, **Smith BK**, Corti M, Lawson LA, Falk DJ, Byrne BJ. The Respiratory System in Pompe Disease. *Resp Physiol Neurobiol*. 2013; 189(2): 241-9. PMID: 23797185. PMCID: PMC4083814.
33. Martin AD, **Smith BK**, Gabrielli, A. Mechanical ventilation, diaphragm weakness and weaning: a rehabilitation perspective. *Resp Physiol Neurobiol*. 2013; 189(2): 377-83. PMID: 23692928. PMCID: PMC3808482.
34. **Smith BK**, Mah CS, Martin AD, Lawson LA, Conlon TJ, Clement N, Islam S, Dobjia N, Collins SW, Byrne BJ. Phase I/II trial of AAV1-GAA gene therapy to the diaphragm for chronic respiratory failure in Pompe disease: initial safety and ventilatory outcomes. *Human Gene Therapy*, 2013; 24(6): 630-40. PMID: 23570273. PMCID: PMC3689178.
35. **Smith BK**, Bleiweis MS, Neel C, Martin AD. Inspiratory Muscle Strength Training in Infants with Congenital Heart Disease and Prolonged Mechanical Ventilation: Case Report. *Physical Therapy*. 2013; 93(2): 229-36. PMID: 22466028. PMCID: PMC3563028.
36. **Smith BK**, Martin AD, Vandenborne K, Darragh BD, Davenport PW. Chronic intrinsic transient tracheal occlusion elicits diaphragm remodeling in conscious rodents. *PLoS One*. 2012; 7(11): e29624. PMID: 23133678. PMCID: PMC3486807.
37. Goddard MA, Mitchell EL, **Smith BK**, Childers MK. Establishing Clinical End Points of Respiratory Function in Large Animals for Clinical Translation. *Physical Medicine and Rehabilitation Clinics of North America*, 2012; 23(1): 75-94. PMID: 22239876. PMCID: in progress.
38. Huang T, Deoghare HV, **Smith BK**, Beaver TM, Baker HV, Martin AD. Gene Expression Changes in the Human Diaphragm Following Cardiothoracic Surgery. *Journal of Thoracic and Cardiovascular Surgery*. 2011; 142(5): 1214-22. PMID: 21463877. PMCID: in progress.

39. Byrne BJ, Falk DJ, Pacak CA, Nayak S, Hersog RW, Elder ME, Collins SW, Conlon TJ, Clement N, Cleaver BD, Cloutier DA, Porvasnik SL, Islam S, Elmallah MK, Martin A, **Smith BK**, Fuller DD, Lawson LA, Mah CS. Pompe disease gene therapy. *Human Molecular Genetics*. 2011; 20(R1): R61-8. PMID: 21518733. PMCID: PMC3095055.
40. Edwards TM, **Smith BK**, Watts DL, Germain-Aubrey CC, Roark A, Bybee S, Cox CE, Hamlin HJ, Guillette LJ. Group-Advantaged Training of Research (G.A.T.O.R.): A Metamorphosis of Mentorship. *Bioscience*. 2011; 61(4): 301-311. DOI: 10.1525/bio.2011.61.4.10.
41. Martin AD, **Smith BK**, Davenport PW, Harman E, Gonzalez-Rothi R, Baz M, Layon J, Banner M, Caruso L, Deoghare H, Huang T, Gabrielli A. Inspiratory muscle strength training improves weaning outcome in failure to wean patients: A controlled trial. *Critical Care*. 2011; 15(2): R84. PMID: 21385346. PMCID: PMC3219341.
42. **Smith BK**, Bleiweis MS, Zauhar J, Martin AD. Inspiratory Muscle Training in a Child with Nemaline Myopathy and Organ Transplantation. *Pediatric Critical Care Medicine*, 2011; 12(2): e94-8. PMID: 20407395. PMCID: PMC3633211.
43. **Smith BK**. A Pilot Study Evaluating Therapist-Nurse Inter-Rater Reliability of Dionne's Egress Test in Morbidly Obese Patients. *Acute Care Perspectives*, 2008; 17(4): 1-7. ISSN: 1551-9147.
44. **Kellerman BA**, Martin D, Davenport PW. Inspiratory Strengthening Effect on Resistive Load Detection and Magnitude Estimation. *Medicine and Science in Sports and Exercise*. 2000; 32(11): 1859-1867. PMID: 11079514. PMCID: PMC in progress.
45. **Kellerman BA**. The Role of Physical Therapy in the Multidisciplinary Treatment of Necrotizing Fasciitis. *Acute Care Perspectives*, 1996; 4: 8-9, 24-25. ISSN: 1551-9147.

Non-refereed Publications

1. **Smith BK**, Renno M, Martin D, Corti M, Byrne BJ. Respiratory motor function in individuals with centronuclear myopathy and ventilatory insufficiency (Response to Letter to Editor). *Muscle and Nerve*. 2016; 53 (4): 660-1. PMID: 26561983.
2. Rutkowski A, Chatwin M, Koumbourlis A, Fauroux B, Simonds A; CMD Respiratory Physiology Consortium. 203rd ENMC international workshop: respiratory pathophysiology in congenital muscle disorders: implications for proactive care and clinical research 13-15 December, 2013, Naarden, The Netherlands. *Neuromuscular Disorders*. 2015; 25(4): 353-8. PMID: 25613806.

Published Refereed Abstracts

1. Sajjadi E, Ehrbar JG, Seven YB, Dickinson PG, Mitchell GS, **Smith BK**. Respiratory Muscle Activity During Maximal Efforts in ALS Patients and Healthy Controls. *FASEB J*. 2020; 34: s1.6199. <https://doi.org/10.1096/fasebj.2020.34.s1.06199>
2. Bresciani G, Mankowski R, Ferreira L, Leeuwenburgh C, Arnaoutakis G, Martin T, Xue W, Martin AD, Beaver T, **Smith, BK**. Intraoperative Hemidiaphragm Stimulation Offsets Slow-Twitch Muscle Fiber

Atrophy and Contractile Dysfunction. *FASEB J.* 2020; 34: s1.7297.
<https://doi.org/10.1096/fasebj.2020.34.s1.07297>

3. Servais L, Shieh P, Dowling J, Kuntz N, Muller-Felber W, **Smith B**, Bonnemann C, Muntoni F, Bilder D, Duong T, Graham R, Jain M, Lawlor M, MacBean V, Noursalehi M, Pitts T, Rafferty G, Rico S, Prasad S. “INCEPTUS pre-phase 1, prospective, non-interventional, natural history run-in study to evaluate subjects aged 4 years and younger with X-linked myotubular myopathy (XLMTM).” (2019) *Neuromuscular Disorders*, 29, S79.
4. Shieh PB, Muller-Felber W, **Smith B**, Bonnemann CG, Dowling JJ, Kuntz N, Muntoni F, Servais L, Bilder D, Duong T, Graham R, Jain M, Lawlor MW, MacBean V, Noursalehi M, Pitts T, Rafferty G, Rico S, Prasad S. “INCEPTUS Pre-Phase 1, Prospective, Non-Interventional, Natural History Run-in Study to Evaluate Subjects Aged 3 Years and Younger with X-Linked Myotubular Myopathy (XLMTM): Preliminary Findings.” (2018) *Neuromuscular Disorders*, 28, S70.
5. **Smith BK**, Allen S, Martin AD, Byrne BJ. “Compensatory responses to unexpected inspiratory loads are distinct from clinical tests of respiratory capacity.” (2018) *Molecular Genetics & Metabolism*, 123, S132-3.
6. **Smith BK**, Fuller DD, Martin AD, Lawson LA, Lottenberg L, Islam S, Byrne BJ. “Diaphragm pacing augments ventilatory function in Pompe disease.” (2013) *Molecular Genetics & Metabolism*, 108, S86.
7. **Smith BK**, Byrne BJ, Onders RP, Lawson LA, Lottenberg L, Islam S, Martin AD. “Chronic Intramuscular Electrodes to Evaluate Diaphragm Inspiratory Load Compensation in a Ventilated Adult.” (2012) *American Journal of Respiratory and Critical Care Medicine*, 185, A5979.
8. Byrne B, **Smith B**, Martin A, Mah C, Lawson LA, Islam S, Conlon T, Phillips D, Collins S. “Phase I/II Trial of Adeno-associated Virus Acid-alpha Glucosidase (GAA) Gene Therapy for Ventilatory Failure in Pompe Disease.” (2012) *Molecular Genetics and Metabolism*, 105, S24.
9. Deoghare H, Joseph AM, **Smith B**, Leeuwenburgh C, Beaver T, Martin T, Martin D. “Effect Of Intermittent Phrenic Nerve Stimulation During Cardiothoracic Surgery On Human Diaphragm Mitochondrial Respiration.” (2011) *American Journal of Respiratory and Critical Care Medicine*, 183, A2166.
10. **Smith, BK**, Bleiweis MS, Deoghare H, Neel C, Zauhar J, Martin AD. “Inspiratory Muscle Strength Training in an Infant with Congenital Heart Disease and Prolonged Mechanical Ventilation.” (2011) *American Journal of Respiratory and Critical Care Medicine*, 183, A1865.
11. **Smith BK**, Martin AD, Davenport PW. “Respiratory Muscle Conditioning Intensity is a Greater Factor than Duration for Eliciting Diaphragm Fiber Hypertrophy.” (2011) *FASEB J.* 25, 653.5.
12. **Smith BK**, Martin AD, Davenport PW. “Duration of Intermittent Total Tracheal Occlusion (ITTO) Sessions Influences Fiber CSA in Parasternal Muscle Fibers.” (2011) *FASEB J.* 25, 653.6.

13. **Smith BK**, Martin AD, Vandeborne K, Davenport PW. “Effect of Tracheal Occlusion on Diaphragm Fiber Remodeling.” (2010) *American Journal of Respiratory and Critical Care Medicine*, 179, A4385.
14. Mathur S, **Smith BK**, Senesac C, Lott DJ, Walter GA, Martin AD, Vandeborne K. “Respiratory and Lower Limb Muscle Strength in Boys with Duchenne Muscular Dystrophy.” (2009) *Physiotherapy Canada*, 61, S68.
15. **Smith BK**, Mathur S, Hotchkiss M, Ye F, Martin AD, Vandeborne K, Davenport PW. “Diaphragm Remodeling Following Repeated Bouts of Acute Tracheal Occlusion.” (2009) *American Journal of Respiratory and Critical Care Medicine*, 178, A4207.
16. **Smith BK**, Huang T, Deoghare, Martin AD. “Rate of Inspiratory Pressure Development and Maximal Inspiratory Pressure in Ventilated and Healthy Adults.” (2009) *American Journal of Respiratory and Critical Care Medicine*, 178, A3802.
17. Martin AD, **Smith BK**, Davenport, PW, Banner MJ, Gabrielli A. “Effects of Inspiratory Muscle Strength Training on Loaded Breathing in Difficult to Wean Patients.” (2009) *American Journal of Respiratory and Critical Care Medicine*, 178, A3801.
18. **Smith BK**, Martin AD. “Widespread Presence of ICU-Acquired Weakness in Patients who Require Prolonged Mechanical Ventilation.” (2008) *American Journal of Respiratory and Critical Care Medicine*, 177, A500.
19. **Kellerman BA**, Martin D. “The Role Of Inspiratory Muscle Strength In Predicting Six-Minute Walk Distance In Adults With Severe Obstructive Lung Disease.” (1998) *Physical Therapy*, 78, 5, S3.
20. **Kellerman BA**, Martin D & Davenport PW. The Effect of Inspiratory Muscle Strength Training on Magnitude Estimation (ME) of Resistive Loads (R) in Healthy Adults. (1998) *FASEB Journal*, 12, 2, A785.
21. **Kellerman BA**, Irrgang J, Delitto A, VanSwearingen J, Ali M, Scarlett C, Valentino J. Integration of Computerized Documentation to Quantify Treatment Efficacy and Promote Clinical Research. (1996) *Physical Therapy*, 76, 5, S53.

LECTURES, SPEECHES, POSTERS PRESENTED AT PROFESSIONAL CONFERENCES

Invited Talks

1. “Acute Intermittent Hypoxia and Breathing in ALS.” Invited Talk. In Neurotherapeutic Intermittent Hypoxia Workshop, Atlantic Beach, FL, February 11, 2020.
2. “Longitudinal Changes in Ventilatory Function in Pompe Disease.” Invited Talk. In Asociacion Española de Endermos de Glucogenosis Meeting, Malaga, Spain. October 4, 2019.
3. “Respiratory and Motor Function in Centronuclear Myopathies.” Invited Talk. In: MTM-CNM Family Conference, St. Louis, MO, July 20, 2019.

4. "Clinical Trials in Neuromuscular Disease: Lessons Learned and Steps Forward." Educational Session. In APTA Combined Sections Meeting, Washington, DC, January 26, 2019.
5. "Acute Care Research: Grant Opportunities and Writing Tips." Educational Session. In APTA Combined Sections Meeting, Washington, DC, January 24, 2019.
6. "Respiratory Involvement of Pompe Disease." Invited Talk. In Asociacion Española de Endermos de Glucogenosis Meeting, Malaga, Spain. October 5, 2018.
7. "Respiratory Muscle Training Exercise Prescription: Strength or Endurance?" Educational Session. In APTA Combined Sections Meeting, New Orleans, LA, February 23, 2018.
8. "Therapeutic Approaches for Ventilation in Pompe Disease: Old and New." In Asociacion Española de Endermos de Glucogenosis Meeting, Toledo, Spain. September 23, 2017.
9. "Respiratory Function in the Centronuclear Myopathies." In 2017 MTM-CNM Family Conference, Nashville, TN.
10. "Respiratory Function in the Centronuclear Myopathies and X-Linked Myotubular Myopathy." In ZNM Family Conference, Neidernhausen, Germany. May 7, 2016.
11. "Exercise and Breathing in Pompe Disease." Muscular Dystrophy Association of Central Florida, Orlando, FL. April 23, 2016.
12. "Preserving Ventilation in Neuromuscular Disease: Diaphragm Pacing Approach." Educational Symposium. In Experimental Biology 2016, San Diego CA. April 5, 2016.
13. "Research Planning, Design, and Data Collection." Educational Session: I've Got A Great Idea. Acute Care Research from Planning to Publication. In APTA Combined Sections Meeting, Anaheim, CA, February 19, 2016.
14. "Regenerative Rehabilitation Approaches in Pompe Disease." Educational Session: PTJ Symposium on Regenerative Rehabilitation. Educational Session. In APTA Combined Sections Meeting, Anaheim, CA, February 18, 2016. Invited Talk.
15. "Management of Hypoventilation in Neuromuscular Disease: Rehabilitation Science Approach." Rehabilitation Seminar Series, State University of New York at Buffalo, Buffalo, NY. September 28, 2015. Invited Talk.
16. "Take a Deep Breath: Managing Breathing for Today and Tomorrow." In 2015 MTM-CNM Family Conference, July 25, 2015.
17. "Evaluation and Rehabilitation in Chronic Ventilatory Insufficiency." T32 Neuromuscular Plasticity Symposium, Gainesville FL. March 12, 2015. Invited Talk.
18. "Research Mentorship and Networks." Educational Session. In APTA Combined Sections Meeting, Indianapolis, IN, February 7, 2015.
19. "Emerging Therapies in Pompe Disease: Diaphragm Pacing and Gene Therapy." In Association for Glycogen Storage Disease-UK, Wychwood Park, Weston, Cheshire, UK. October 19, 2014.
20. "Respiratory Outcome Measures for Ventilator-Dependent Duchenne Muscular Dystrophy." Outcomes DMD: Parent Project Muscular Dystrophy Preconference Meeting, Chicago, IL. June 26, 2014.

21. "Ventilatory Compromise and Cough Impairments in Pompe Disease." Educational Symposium. In Experimental Biology 2014, San Diego, CA. April 30, 2014.
22. "Making the Case for Respiratory Muscle Training." In APTA Combined Sections Meeting, Las Vegas, NV, February 5, 2014.
23. "Managing Critically Ill Patients in the ICU: Challenges and Potential Solutions." In APTA Combined Sections Meeting, Las Vegas, NV, February 4, 2014.
24. "Respiratory Muscle Stress Testing in Ventilator-Dependent Pediatric Neuromuscular Disease: Solid Endpoint?" 203rd European Neuromuscular Centre: Respiratory Pathophysiology in Congenital Onset Neuromuscular Disease: Implications for Proactive Care and Clinical Research, Naarden, Netherlands. December 13-5, 2013.
25. "Clinical Trial of Gene Therapy to the Diaphragm for Pompe Disease: Past Lessons Direct Future Steps." In Myotubular Myopathy – Centronuclear Myopathy Family Conference, Bloomington, MN, July 28, 2013.
26. "Emerging Therapies for Ventilatory Insufficiency in Pompe Disease." In Association for Glycogen Storage Disease-UK, Wyboston Lakes, Bedfordshire, UK, September 2012.
27. "An Alternative Management Strategy for Ventilatory Failure in Pompe Disease: Emphasis on Recovery." Second Regenerative Rehabilitation Symposium, University of Pittsburgh, Pittsburgh, PA, November 12, 2012.
28. "Lower Extremity Strength Training after Lung Transplantation: Six-Month Outcomes." Fifth Annual International ICU Physical Medicine and Rehabilitation Symposium, San Francisco, CA. May 2012.
29. "Ventilatory Muscle Strength and Functional Outcomes in Mechanically-Ventilated Patients." Rehabilitation Research Seminar Series, University of Florida, Gainesville, FL. March 14, 2012.
30. "Initial Ventilatory Outcomes: Phase I/II Trial of Adeno-associated Virus Acid alpha-Glucosidase (AAV-GAA) Diaphragm Gene Therapy for Ventilatory Failure in Pompe Disease." In Congenital Muscular Dystrophy Symposium, Washington, D.C. February 17, 2012.
31. "Physical Therapy and Exercise Training for Adults with Pompe Disease." Muscular Dystrophy Association of Florida, Orlando, FL. October 30, 2011.
32. "Ventilatory Muscle Training and Plasticity in Mechanically-Ventilated Patients." University of Toronto Cardiorespiratory Physiotherapy Research Division, West Park Hospital, Toronto, Ontario. August 3, 2011.
33. "Respiratory Overload Training and Muscle Plasticity." Interdisciplinary Program Seminar Series, University of Florida, Gainesville, FL. March 15, 2011.
34. "Inspiratory muscle training and de-training effects on strength and ventilatory function in an infant with Pompe disease." Neuromuscular Plasticity Noons Seminar, University of Florida, Gainesville, FL. July 29, 2010.
35. "Lower Extremity Strength Training Following Lung Transplantation: Preliminary Analysis." Neuromuscular Plasticity Noons Seminar, University of Florida, Gainesville, FL. June 26, 2009
36. "Exercise After Stroke." University of Florida Stroke Support Group. Gainesville, FL. April 16, 2009.

37. "Inspiratory Muscle Training in Patients with Prolonged Mechanical Ventilation." University of Florida Capital Campaign, Department of Physical Therapy Alumni Event, Gainesville, FL. September 27, 2007.
38. "Building Your Professional Toolbox." Physical Therapist Assistant Commencement Ceremony, Pensacola Junior College, Pensacola, FL. June 24, 2007.
39. "Cardiopulmonary Update." 4-Week Clinical Inservice Series, Baptist Health Systems, Pensacola, FL. January and February, 2004.

Presenting Author at Scientific Conferences:

1. Renno M, Smith M, Sexton T, Mays S, **Smith BK**. "Children with Centronuclear Myopathies Report Significant Problems with Communication Health-Related Quality of Life." Poster Presentation. 2019 Myology Conference, Bordeaux, France. March 28, 2019.
2. **Smith BK**, Liberati C, Mays S, Byrne BJ, Pitts T. "Coordination of Breath and Stimulator Initiation in Diaphragm-Paced Individuals with Pompe Disease." *Poster Presentation*. 14th Annual WORLD Symposium, San Diego, CA. February 7, 2018.
3. **Smith B** and Pitts T. "Inconsistent Entrainment to Diaphragm Stimulation in Severe Pompe Disease." *Poster Presentation*. 14th Oxford Conference on Modeling and Control of Breathing, Oxford United Kingdom. September 19, 2017.
4. **Smith BK**, Lawson LA, Marcus J, Islam S, Corti M, Collins SW, Byrne BJ. "Improved Diaphragm Descent in Children with Pompe Disease Following Intramuscular Gene Therapy." Platform Presentation. APTA Combined Sections Meeting, San Antonio, TX. February 17, 2017.
5. **Smith BK**, Renno MS, Corti M, Cousins C, Wilbur D, Thompson G, Byrne BJ. "Dynamic Thoracic MRI to Estimate Lung Volume in Duchenne Muscular Dystrophy." *Poster Presentation*. New Directions in Skeletal Muscle Biology, Orlando, Florida. June 30, 2016.
6. **Smith BK**, Corti M, Lawson LA, Byrne BJ. "Phrenic motor unit dysfunction in late-onset Pompe disease." *Platform Presentation*. International Glycogen Storage Disease Conference, Heidelberg, Germany. November 29, 2013.
7. **Smith BK**, Lawson, LA, Martin AD, Collins S, Byrne BJ. "Inspiratory muscle conditioning improves coordination but not strength prior to diaphragm gene therapy for infantile Pompe disease." *Platform Presentation*. APTA Combined Sections Meeting, San Diego, CA. January 23, 2013.
8. **Smith BK**, Collins SW, Martin AD, Mah CS, Lawson LA, Islam S, Conlon TJ, Phillips D, Byrne BJ. "Phase I/II Trial of AAV1-CMV-GAA Gene Therapy in Pompe Disease: Initial Ventilatory Outcomes." *Platform Presentation*. New Directions in Biology and Disease of Skeletal Muscle Conference, New Orleans, LA. June 20, 2012.
9. **Smith BK**, Franceschi A, Martin, AD. "Do Recipients of Lung Transplantation Retain the Lower Extremity Strength Gains Achieved During Acute Rehabilitation?" *Platform Presentation*. APTA Combined Sections Meeting, Chicago, IL. February 10, 2012.
10. **Smith BK**, S. Collins, A. Martin, C. Mah, L. Lawson, S. Islam, T. Conlon, D. Phillips, B. Byrne. "Phase I/II Trial of Diaphragm Gene Therapy for Pompe Disease: Initial Ventilatory Outcomes."

Poster and Platform Presentations. 10th Annual Gene Therapy Symposium, Sonoma, CA. November 17, 2011.

11. **Smith BK**, Franceschi A, Huang T, Deoghare H, Martin DA. “Lower Extremity Strength Training Following Acute Lung Transplantation: Preliminary Report.” *Poster Presentation.* APTA Combined Sections Meeting, San Diego, CA. February 20, 2010.
12. **Smith BK**, Martin AD, Vandenborne K, Davenport PW. Effect of Tracheal Occlusion on Diaphragm Fiber Remodeling. *Poster Presentation.* American Thoracic Society Meeting, New Orleans, LA. May 18, 2010.
13. **Smith BK**, Huang T, Deoghare, Martin AD. “Rate of Inspiratory Pressure Development and Maximal Inspiratory Pressure in Ventilated and Healthy Adults.” *Poster Presentation.* American Thoracic Society Meeting, San Diego, CA. May 18, 2009.
14. **Smith BK**, Attia S, Darragh B, Martin AD. “Training Adaptations in Quadriceps Torque Generation and Decay in Lung Transplant Recipients.” *Poster Presentation.* Southeastern American College of Sports Medicine Conference. Birmingham, AL. February 13, 2009.
15. **Smith BK**, Huang T, Deoghare H, Martin AD. “Inspiratory Training Improves Sub-Maximal Pressure Development in Adults with Mechanical Ventilation.” *Platform Presentation.* APTA Combined Sections Meeting. Las Vegas, NV. February 11, 2009.
16. **Smith BK**, Huang T, Deoghare H, Martin AD. “Inspiratory Pressure Development and Maximal Inspiratory Pressure in Healthy and Ventilated Adults.” *Poster Presentation.* 4th Annual Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. December 5, 2008.
17. **Smith BK**, Martin AD. “Strength Characteristics of Critically Ill Patients Requiring Prolonged Mechanical Ventilation.” *Poster Presentation.* APTA Combined Sections Meeting. Nashville, TN. February 8, 2008.
18. **Smith BK**, Mathur S, Hotchkiss M, Ye F, Vandenborne K, Martin AD, Davenport PW. “Histological Features of the Diaphragm Following Acute Bouts of Tracheal Occlusion.” *Poster Presentation.* 3rd Annual Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. January 31, 2008.
19. **Smith BK**, Martin, AD. “Inspiratory Muscle Training Improves Strength in Difficult to Wean Patients.” *Poster Presentation.* 20th Annual College of Public Health and Health Professions Research Day. Gainesville, FL. April 12, 2007.
20. **Smith BK**, Hines, AP. “Measuring Inter-Rater Reliability of the Egress Test.” *Poster Presentation.* American Physical Therapy Association Scientific Meeting and Exposition. Orlando, FL. June 24, 2006.
21. **Smith BK**, Raybourn M, Field D, Austermann MA. “Building an Acute Care Physical Therapy Electronic Medical Record (EMR) Across the Age Continuum.” *Poster Presentation.* American Physical Therapy Association Scientific Meeting and Exposition. Orlando, FL. June 23, 2006.
22. **Kellerman, BA**, Martin D, Davenport PW. “The Role Of Inspiratory Muscle Strength In Magnitude Estimation Of Resistive Loads.” *Poster Presentation.* Federation of Applied Science and Experimental Biology. San Francisco, CA. April 22, 1998.

23. **Kellerman BA**, Martin AD. “The Role Of Inspiratory Muscle Strength In Predicting Six- Minute Walk Distance In Adults With Severe Obstructive Lung Disease.” *Poster Presentation*. American Physical Therapy Association Scientific Meeting and Exposition. Orlando, FL. June 7, 1998.
24. **Kellerman BA**, Brown T. “The Role of Physical Therapy In The Multidisciplinary Treatment of Necrotizing Fasciitis.” *Platform Presentation*. APTA Combined Sections Meeting. Atlanta, GA. February 16, 1996.
25. **Kellerman BA**, Irrgang J, Delitto A, VanSwearingen J, Ali M, Scarlett C, Valentino J. “Integration Of Computerized Documentation To Quantify Treatment Efficacy And Promote Clinical Research.” *Platform Presentation*. American Physical Therapy Association Scientific Meeting and Exposition. Minneapolis, MN. June 15, 1996.

Other Scientific Presentations

1. Barnard AM, Lott DJ, Bahtra A, Riehl SL, Willcocks RJ, Triplett WT, **Smith BK**, Vandeborne K, Walter GA. “Longitudinal Study of Expiratory Muscle Fatty Acid Replacement in Duchenne Muscular Dystrophy.” Online Poster Presentation. 2020 MDA Conference.
2. Sajjadi E, Mabe PM, Mitchell GS, **Smith BK**. “Pulmonary function and respiratory muscle strength evaluation: does the testing interface matter?” *Poster Presentation*. APTA Combined Sections Meeting, Washington, DC, January 26, 2019.
3. Flynn S, Oviedo V, Hoffmann W, Grindo T, Limberg T, Niemeier J, Robinson K, Stearns M, **Smith B**. “Initial Usability and Validation of Inspiration Point, A Digital Pulmonary Rehabilitation Tool for Use with Self-Management Interventions for Persons with COPD.” *Poster Presentation*. 2018 American Association of Cardiovascular and Pulmonary Rehabilitation Conference.
4. Barnard A, Lott d, Bahtra A, Triplett W, Forbes S, Riehl S, Willcocks R, **Smith BK**, Vandeborne K, Walter G. “An imaging study of the diaphragm and accessory respiratory muscles in Duchenne muscular dystrophy.” *Poster Presentation*. 2018 New Directions in Biology and Disease of Skeletal Muscle Conference, New Orleans, LA, June 26, 2018.
5. Liberati C, Kugelmann EL, Byrne BJ, Martin AD, **Smith BK**. “Diaphragm pacing and spontaneous breath coordination in Pompe disease: a case report.” *Poster Presentation*. 2018 MDA Clinical Care Conference, Washington, DC, March 13, 2018.
6. Ahmed S, Sutor T, Sajjadi E, **Smith BK**, Mitchell GS, Martin D. “Acute intermittent hypoxia and inspiratory threshold loading as strategies to enhance inspiratory muscle function.” *Poster Presentation*. APTA Combined Sections Meeting, New Orleans, LA, February 23, 2018.
7. Keppel M, **Smith BK**. “Feasibility of circuit training during hematopoietic stem cell transplantation: case series.” *Poster Presentation*. APTA Combined Sections Meeting, New Orleans, LA, February 23, 2018.
8. Studer-Byrnes RL, Corches CL, **Smith BK**. “Functional outcomes of a patient post-stroke with LVAD: a case study.” *Poster Presentation*. APTA Combined Sections Meeting, New Orleans, LA, February 24, 2018.

9. Barnard AM, Lott DJ, Batra A, Willcocks R, Forbes SC, Triplett W, Riehl S, **Smith BK**, Vandeborne K, Walter G. "Respiratory muscle composition and breathing dynamics assessed by MRI in Duchenne muscular dystrophy." *Poster Presentation*. Imaging in Neuromuscular Diseases Conference, Berlin, Germany. November, 2017.
10. Barnard AM, Lott DJ, Willcocks RJ, Forbes SC, Triplett W, Riehl S, Batra A, **Smith BK**, Vandeborne K, Walter GA. "A Novel MRI Study of Diaphragm and Chest Wall Dynamics in Duchenne Muscular Dystrophy." *Poster Presentation*. 30th Annual PHHP Research Day. Gainesville, FL. April 2017.
11. Barnard AM, Lott D, Willcocks RJ, Forbes SC, Triplett W, Riehl S, Batra A, **Smith BK**, Vandeborne K, Walter GA. "The Effects of Failed Muscle Regeneration on Trunk and Respiratory Muscle Composition and Function in Duchenne Muscular Dystrophy." *Poster Presentation*. 12th Annual Neuromuscular Plasticity Symposium. Gainesville, FL. Mar 2017.
12. Barnard AM, Lott DJ, Willcocks R, Forbes SC, Triplett W, Batra A, **Smith BK**, Vandeborne K, Walter G. "An MRI Investigation of Trunk Muscle Involvement and Effects on Expiratory Function in Duchenne Muscular Dystrophy." *Poster Presentation*. Advances in Skeletal Muscle Biology in Health & Disease. Gainesville, FL. March 8, 2017.
13. Barnard AM, Lott D, Willcocks RJ, Forbes SC, Triplett W, Batra A, **Smith BK**, Vandeborne K, Walter GA. "Preliminary Investigation of Trunk Muscle Involvement in Duchenne Muscular Dystrophy using Magnetic Resonance Imaging." APTA Combined Sections Meeting. San Antonio, TX. February 19, 2017.
14. DiFato R, **Smith B**. "Is Fear of Movement Associated with Functional Mobility After Coronary Artery Bypass Graft Surgery?" *Poster Presentation*. APTA Combined Sections Meeting. Anaheim, CA. February 18, 2016.
15. Markut K, **Smith B**. "Physical Therapy Discharge Recommendation Based on Personal Factors and Performance on Two-Minute Walk Test in Patients Hospitalized with Chronic Obstructive Pulmonary Disease: A Case Study." *Poster Presentation*. APTA Combined Sections Meeting. Anaheim, CA. February 18, 2016.
16. Vernot V, Byrne BJ, Martin AD, Lawson LA, Collins SC, **Smith BK**. "Volume compensation to inspiratory loads improves after gene therapy for Pompe disease." *Poster Presentation*. WORLD Lysosomal Storage Disease Network, Orlando, Florida. February 10, 2015.
17. Mehta G, Byrne B, Martin D, Fuller D, **Smith BK**. "Respiratory plasticity after diaphragm pacing: power spectral analysis." *Platform Presentation*. APTA Combined Sections Meeting, Indianapolis, IN. February 6, 2015.
18. Patel K, **Smith B**. "Acute Care Outcomes of Three Patients Following Total Knee Arthroplasty with Continuous Femoral Nerve Block: A Case Series." *Poster Presentation*. APTA Combined Sections Meeting, Chicago, IL. February 4, 2014.
19. Mehta G, **Smith B**. "From Fighting for Freedom to Struggling for Function: An Ataxia Case Study." *Poster Presentation*. APTA Combined Sections Meeting, Chicago, IL. February 4, 2014.

20. Bueno D, **Smith BK**. “Increased Gait Velocity And Improvements In Functional Walking Category Following Reserve Velocity Gait Training: A Pilot Study.” *Poster Presentation*. APTA Combined Sections Meeting, Chicago, IL. February 10, 2012.
21. Blanchard E, **Smith BK**. “Physical Therapy Interventions for a Patient with Carnitine Palmitoyltransferase II Deficiency (Myopathic Form): a Case Report.” *Poster Presentation*. APTA Combined Sections Meeting, Chicago, IL. February 9, 2012.
22. Darragh B, **Smith BK**, Attia SM, Martin AD. “Ratio of Hamstring to Quadriceps Torque Values in Lung Transplant Recipients.” *Poster Presentation*. Southeastern American College of Sports Medicine Conference. Birmingham, AL. February 13, 2009.
23. Deoghare HV, Huang T, **Smith BK**, Davenport PW, Gabrielli A, Banner MJ, Caruso L, Layon AJ, Martin AD. “Catecholamine and Heart Rate Variability Changes During Failed Spontaneous Breathing Trials in Difficult to Wean Patients.” *Poster Presentation*. American Thoracic Society Meeting. Toronto, ON. May 19, 2008.
24. Huang T, Deoghare H, **Smith BK**, Baz MA, Gonzalez-Rothi R, Harman EM, Martin AD. “Factors Predicting Weaning Outcome in Difficult to Wean Adult Patients.” *Poster Presentation*. American Thoracic Society Meeting. Toronto, ON. May 19, 2008.
25. Attia S, **Smith BK**, Mathur S, Ye F, Hotchkiss MT, Darragh BD, Martin AD, Davenport PW, Vandeborne K. “Satellite Cell Activation in the Diaphragm Following Tracheal Occlusion in Rats.” *Poster Presentation*. Southeastern American College of Sports Medicine Conference. Birmingham, AL. February 12, 2009.